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U.S. EXPORTS AND IMPORTS OF CACTI, 1977-1979

A Presentation and Analysis from
U.S. Fish and Wildlife Service
Records and Data

By

Linda McMahan, Ph.D.

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TRAFFIC(U.S.A.) - Trade Records Analysis of Flora and Fauna in Commerce - is a Specialist Group of the Species Survival Commission of the International Union for Conservation of Nature and Natural Resources. Its funtion is to monitor the international trade in wildlife and plants. TRAFFIC(U.S.A.) is funded by World Wildlife Fund-U.S.

Introduction

Each year, millions of plants leave or enter the United States. United States Department of Agriculture (USDA) officials inspect approximately 165 million plant "units" as they are imported each year. USDA estimates that 10% of these, or approximately 16.5 million units, are species listed on the Appendices of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)(McIntyre, 1981). A recent sampling by USDA indicated that 92,870 CITES plants were exported in four months of 1981 (McIntyre, 1981), meaning that 279,000 or more CITES plants may leave the United States each year. Based on these estimates and data contained in the U.S. CITES Annual Report, as many as two-thirds of the live CITES plants in trade, or approximately 10 million plants, may be cacti.

This report contains tables and analysis of cactus import and export data collected by the U.S. Fish and Wildlife Service (USFWS) to fulfill the requirements of CITES. Some of the data appeared in summary form in the most recent U.S. CITES Annual Report for 1979. Other data were transcribed from USFWS files on CITES exports of live plants.

How Many Cacti are in International Trade?

It is uncertain how many cacti are traded internationally. In 1979 in the United States, two-thirds of the 2,116,977 living plant specimens traded under CITES permit were imports. Cacti accounted for two-thirds of live imports and 37% of live exports and re-exports reported in the U.S. CITES Annual Report. The U.S. Management Authority for CITES recorded commercial imports of 941,926 cacti and commercial exports of 29,283 cacti.

USDA sources suggest, however, that the data included in this report underestimate the actual volume of trade. A draft preliminary report by TRAFFIC, USA (McCarten *et. al.*, 1981) contained analysis of records maintained by the Animal and Plant Health Inspection Service (APHIS) of USDA and found that imports of cacti and succulents averaged over 5.5 million per year in 1978 and 1979. The TRAFFIC data are not directly comparable to the data in the present report because the TRAFFIC report combined data on cacti and succulents. Despite the lack of correspondence, it is clear that international trade in cacti is substantial.

Analysis of presently available USFWS data in the light of USDA estimates highlights several inadequacies in the present reporting system. CITES reporting began in 1977. By 1979, the third year of U.S. CITES record keeping, about 1 million cacti were documented in trade compared to an estimated annual trade of approximately 10 million cacti. Many cacti are apparently leaving and entering the United States without proper CITES documentation. Some of these plant specimens may be included in shipments with numbers of individual plants unspecified; however, such shipments probably cannot account for the possible 9 million undocumented cactus specimens in international trade. Another major flaw is the use of general names for reporting purposes. For example, 97% of the commercial cactus imports for 1979 identified the cactus species traded simply as "Cactaceae." Thus, the data are lacking to determine which species of cacti are most heavily traded.

To add to the confusion on the number of cacti in trade, the 1979 Annual Report (see references) reports 702,516 specimens of all CITES plants commercially exported in 1979. However, this figure includes over 400,000 cactus seeds, and thus grossly overestimates the reported number of exports of individual plants, particularly cacti.

CITES Protection

All Cactaceae were listed on Appendix II of the CITES in 1975, and seven species were moved from Appendix II to Appendix I in 1981. The criteria for listing on Appendix II are found in Article II(2) of the CITES as follows:

> Appendix II shall include:
>
> (a) all species which although not necessarily now threatened with extinction may become so unless trade in specimens of such species is subject to strict regulation in order to avoid utilization incompatible with their survival; and
>
> (b) other species which must be subject to regulation in order that trade in specimens of certain species referred to in sub-paragraph (a) of this paragraph may be brought under effective control.

At the Third Meeting of the Parties, held in New Delhi, India, in March of 1981, seven cactus species were added to Appendix I of the CITES, which "shall include all species threatened with extinction which are or may be affected by trade," CITES, Article II(1). These species are: Ariocarpus agavoides, Ariocarpus scapharostrus, Aztekium ritteri, Echinocereus lindsayi, Obregonia denegrii, Pelecyphora aselliformis, and Pelecyphora strobiliformis.

In addition to the CITES, several other laws and international agreements protect cacti directly or indirectly. For example, 21 species of cacti are listed as endangered or threatened under the United States Endangered Species Act. Several States within the United States (Arizona, for example) protect native cacti (see McMahan, 1980). Finally, cacti are listed by several countries for conservation under the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere, a treaty fostering both habitat protection and trade controls.

Methods — Sources of Data in this Report

The bulk of data in this report, contained in the Appendix, is species specific data on cacti recorded in international trade under the CITES. The data used to compile this report came from CITES permits and certificates issued by the Wildlife Permit Office of the U.S. Fish and Wildlife Service or by the exporting country. These permits or certificates subsequently were collected at the time of U.S. export or import. Two different methods were used to analyze these data. The 1979 data were processed by the Commission staff from raw permit information compiled and electronically filed by the U.S. Fish and Wildlife Service. Data from 1977 and 1978, however, were obtained directly from export documents by the Commission staff.

The data presented in this report encompass the following categories: plant species reported as commercially exported in 1977 and 1978, plant species reported as commercially imported in 1979, and plant species reported as non-commercial imports and exports in 1979. There were no reported non-commercial exports in 1979. Most of these plants were shipped with certificates of exemption as artificially-propagated plants or as re-exports. The choice of scientific names is explained in a prior Commission report, "Plants Protected by the Convention on International Trade in Endangered Species of Fauna and Flora" (McMahan, 1981).

Results

Table 1 contains data on reported exports of CITES species by family for 1977 through 1979, based on records maintained by the U.S. Fish and Wildlife Service, the federal office responsible for keeping these records. Reporting efficiency improved dramatically over the three year period from 1977 through 1979; however, the approximately 78,000 plants reported exported in 1979 falls far short of USDA estimates of 270,000 exports for 1981 (McIntyre, 1981). Figure 1 shows the increase in reporting over these years.

The numbers of cacti exported and imported, both commercially and non-commercially, are summarized in Table 2. Commercial imports reported in 1979 were much higher than reported exports: 941,926 specimens of cacti were reported as commercial imports in 1979, compared with only 29,283 exports.

Table 3 contains data on the number of cactus genera and species reported in international trade in 1977 through 1979. Over the three year period, a total of 115 genera and 602 species (including separate varieties or forms) were reported in international trade.

Table 4 summarizes all species listed on permits which did not specify how many specimens were included in each shipment. It also includes the numbers of unspecified shipments for each species.

Table 5 gives details on reported shipments of cacti identified only to genus.

Table 6 summarizes reported exports and imports of cactus seeds during 1979. No seeds were reported in international trade in 1977 or 1978. The units used to report trade in seeds varied considerably: weights, numbers, and some merely by numbers of shipments. International trade in seeds totaled 492,265 individual seeds (probably estimated numbers), 15 pounds, 2 ounces, and 15 shipments comprising unspecified numbers.

Trade in U.S. rare cacti is summarized in Table 7. The data include reports of international trade in five species listed as "endangered" and four species listed as "threatened" under the U.S. Endangered Species Act (Act). Additionally, twelve species under review for possible listing under the Act were reported in international trade from 1977 through 1979. These plants are named in the U.S. Fish and Wildlife Service Federal Register notice of December 15, 1980 (listed in the references). Even if these were wild-collected plants, such trade was probably legal at the time since none were listed as "endangered" or "threatened" until late in 1979. One problem with monitoring trade in U.S. rare species is that reporting is rarely to the level allowing a determination of the exact identity of the species. For example, Echinocactus horizonthalonius var. nicholii is listed as "endangered" under the Act. Records for 1979 show that 136 specimens identified as Echinocactus horizonthalonius (not identified to variety) were exported. Also in 1979, 606 specimens identified only as Mammillaria were exported; the records do not indicate whether these plants are one of several rare Mammillaria species under review for listing under the Act.

Tables 8 and 9 are lists of cactus species reported in international trade in numbers of 100 or more specimens. Table 8 lists these species in decreasing order by number reported in trade; Table 9 is an alphabetical listing. The 69 plant species listed in these two tables account for 50,738 of the plants reported in international trade for the categories covered in this report, representing

over 93% of plants identified to at least the species level, but only 5.5 % of all individual plants reported in trade.

Finally, the appendix contains detailed species-by-species data that constitutes the best available information on international trade in cacti. This supplement is the source for most of the tables and the basis for most of the discussion in this report.

Discussion — Inadequacies of the Data

The information in Table 2 highlights some of the inadequacies of the data analyzed in this report. For example, 94% of reported imports or exports were only identified to the family level, as "Cactaceae." Reports of commercial imports for 1979 appear to be the main source of this problem. In that year, 97% of the 941,926 cacti imported were identified only as "Cactaceae." Reports of U.S. exports show much more detailed reporting to at least the species level. Each year over the three year period showed improvements over the prior year. By 1979, 92% of exports were identified to the species, subspecies, variety or form level. Another 7% were identified only to genus, and only 2.6% were identified as merely "Cactaceae."

The lack of detailed reporting is also shown by the data in Table 5, containing a list of cactus species identified only to genus. For 1979, the year showing the largest figures, commercial exports of such cacti totaled 1,605 specimens and 51,050 seeds, and imports totaled 3,243 specimens and 110 shipments of undetermined numbers.

In addition to the lack of detailed scientific names reported for all categories, many reports did not specify how many specimens were included in each shipment (see Table 4). For all categories of exports or imports in this report, 243 shipments of cacti were reported without detailing the number of specimens in each shipment.

The methods for reporting of seed exports and imports as shown in Table 6 present several problems. The lack of uniform reporting provides inadequate data about how many seeds actually are in international trade. Record keepers should insist on one method of identifying seed shipments, preferably by weight. Also, reporting of seeds by numbers as well as by weight produced an impression that more individual plants are in trade than were actually recorded. Most of the cacti shown in trade in the 1979 CITES Annual Report were seeds and not individual plants.

Conclusions

Despite the shortcomings of the available data, several conclusions emerge. The international cactus trade to and from the U.S. is large. Documented figures under CITES record one million cactus in trade. However, estimates of actual plant trade volumes as recorded by the USDA suggest that up to 10 million cacti may be traded each year. Cactus imports to the United States apparently exceed exports of native cacti by more than ten times; however, far less data has been collected on exports from the United States than on imports. The increasing use of computer technology to monitor trade should permit more accurate, standardized, and detailed reporting of scientific names and units in the future.

References

Fish and Wildlife Service, Department of Interior, Endangered and Threatened Wildlife and Plants: Review of Plant Taxa for Listing as Endangered or Threatened Species. 45 Fed. Reg. 82481, December 15, 1980.

McCarten, Niall, Faith Thompson Campbell, and Thomas C. Gibson, 1981. The International Trade in Plants Focussing on the United States, A Preliminary Report. Working Draft, TRAFFIC Species Report No. 4.

McIntyre, Thomas, Animal and Health Inspection Service, U.S. Department of Agriculture, telephone conversation of July 23, 1981.

McMahan, Linda, 1980. Legal Protection for Rare Plants, 29 The American University Law Review 515.

McMahan, Linda, 1981. Plants Protected by the Convention on International Trade in Endangered Species of Fauna and Flora, A List of Plants Reported in Trade, Including Common Names and Synonyms, The International Convention Advisory Commission, Washington, D.C.

Wildlife Permit Office, U.S. Fish and Wildlife Service, Department of the Interior, 1981. Convention on International Trade in Endangered Species of Wild Fauna and Flora, Annual Report for 1979 for the United States of America.

Table 1

Approximate Number of Convention Plants Reported as Exports, 1977-1979
Listed by Family

Plant Family	1977	1978	1979
Apocynaceae	--	20	3
Asclepiadaceae	11	2	46
Cactaceae	970	2,360	29,280
Cycadaceae	--	--	3,690
Didiereaceae	--	45	11
Euphorbiaceae	50	300	740
Liliaceae	16	56	10,190
Orchidaceae	1,770	3,000	34,250
Portulacaceae	12	8	--
Zamiaceae	--	--	22
TOTALS	2,829	5,791	78,230

Note: The methods used to count the years 1977 and 1978 may differ slightly. This table and graph represent a "start-up" curve for increased reporting and do not necessarily indicate an increase in trade. Numbers above 50 have been rounded off. Data are from forms and computer files from the U.S. Fish and Wildlife Service and do not necessarily represent true numbers of plants exported from the United States.

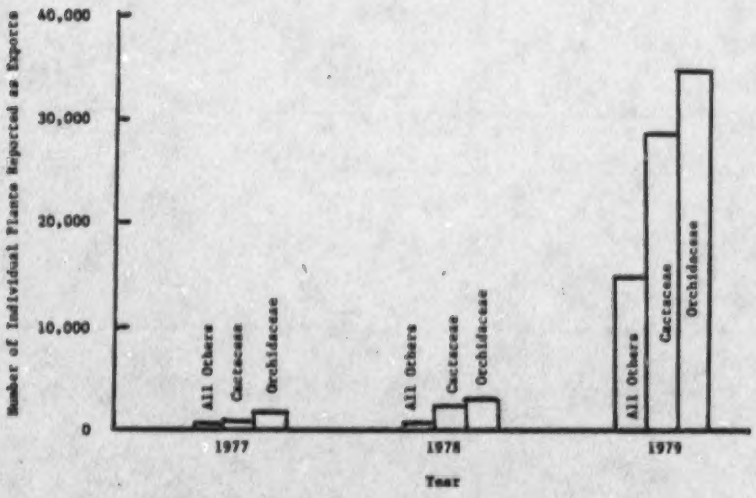

Figure 1. Increase in Reported Convention Plants, 1977-1979.

Table 2
Reported Exports and Imports of Cacti, 1977 - 1979
Identification to Family, Genus or Species

Identification Level	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports	Totals
Number of plants reported as Cactaceae only	—	876	754	913,132	51	914,813
(percent of column total)	(0%)	(37%)	(2.6%)	(97%)	(15%)	(94%)
Number of plants reported to genus only	709	173	1,605	3,243	—	5,730
(percent of column total)	(73%)	(7%)	(5.5%)	(0.3%)	(0%)	(0.6%)
Number of plants reported as species, subspecies, varieties, or forms.	261	1309	26,924	25,551	291	54,336
(percent of column total)	(27%)	(56%)	(92%)	(2.7%)	(85%)	(5.5%)
TOTALS	970	2358	29,283	941,926	342	974,879

Note: These figures do not include exports or imports reported as 'number of shipments' or 'seeds,' meaning that these percentages may be conservative estimates of the actual detail of reporting.

Table 3
Cactus Genera and Species Reported as U.S. Exports or Imports, 1977-1979

	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports	All Years*
Number of genera	26	50	90	55	12	115
Number of species	45	152	414	121	55	602

* The numbers in the last column combine names from all years and are not simply totals of the individual years.

Table 4

Cactus Shipments with Plant Numbers not Specified

Codes	Scientific Name	1978 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports	Totals
	CACTACEAE (not specified)	—	84	1	85
2	Astrophytum spp.	—	1	—	1
2	Cephalocereus spp.	—	1	—	1
2 E	Cephalocereus maxonii	—	1	—	1
2 E	Cephalocereus senilis	—	1	—	1
2 N	Cereus peruvianus	—	21	—	21
2 N	Cereus trigonus	—	—	—	—
	* Hylocereus trigonus	—	1	—	1
2	Coplapoa cupreata	1	—	—	1
2	Coplapoa tenuissima	1	—	—	1
2	Coryphantha spp.	—	3	—	3
2	Echinocactus spp.	—	1	—	1
2	Echinocereus spp.	—	2	—	2
2	Encephalocarpus spp.	—	2	—	2
2	Epiphyllum spp.	—	1	—	1
2	Espostoa laticornua	—	1	—	1
2	Espostoa procera	—	1	—	1
2	Espostoa ritteri	—	1	—	1
2	Ferocactus spp.	—	2	—	2
2	Gymnocactus mandragora	—	1	—	1
2	Gymnocalycium saglionisense	—	1	—	1
2	Lemaireocereus spp.	—	—	1	1
2 E	Lemaireocereus marginatus	—	1	—	1
2	Mammillaria spp.	—	79	—	79
2	Mammillaria albiflora	—	1	—	1
2 E	Mammillaria mazatlanensis	—	1	—	1
2 E	Mammillaria napina	—	1	—	1
2 E	Mammillaria theresae	—	1	—	1
2	Mediolobivia haefneriana	—	1	—	1
2	Mediolobivia ritteri	—	1	—	1
2	Neoiloydia spp.	—	3	—	3
2	Neowerdermannia chilensis	—	1	—	1
2	Notocactus purpureus	—	1	—	1
2	Notocactus rubrispinus (U)	—	1	—	1
2	Notocactus tenuicylindricus	—	1	—	1
2	Notocactus vanvlietii	—	1	—	1
2	Opuntia spp.	—	1	—	1
2	Pachycereus spp.	—	1	—	1
2	Pereskia spp.	—	2	—	2
2	Pilosocereus tweedyanus	—	1	—	1
2	Rodentiophila coplapoinsis (U)	—	1	—	1
2	Stenocactus spp.	—	1	—	1
2	Strombocactus spp.	—	4	—	4
	* Turbinicarpus spp.	—	1	—	1
2	Sulcorebutia spp.	—	3	—	3
2	Sulcorebutia glomerispina	—	1	—	1
2	Sulcorebutia tuneriensis	—	1	—	1
2	Thelocactus spp.	—	2	—	2
	TOTAL SHIPMENTS WITH NUMBERS UNSPECIFIED	2	239	2	243

* = synonym for preferred name listed directly above; N = Native; spp. = unidentified species

E = exotic; 1 = Appendix I; 2 = Appendix II; SH = shipments; U = unverified plant name.

Table 5

Cactus Exports and Imports Identified only to Genus

Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commerical Imports	1979 Noncommercial Imports
Ancistrocactus spp.	—	—	1	—	—
Ariocarpus spp.	200	—	291 + 51,000 SD	53	—
Astrophytum spp.	—	—	41	106 + 1 SH	—
Cephalocereus spp.	—	24	—	757 + 1 SH	—
Cereus spp.	14	—	—	—	—
Chamaecereus spp.	—	—	—	7	—
Cleistocactus spp.	—	2	—	—	—
Copiapoa spp.	—	23	—	—	—
Coryphantha spp.	—	—	1	150 + 3 SH	—
Discocactus spp.	—	—	—	4	—
Echinocactus spp.	—	12	—	1 + 1 SH	—
Echinocereus spp.	80	4	75	1 + 2 SH	—
Echinopsis spp.	—	—	—	106	—
Encephalocarpus spp.	25	—	—	2 SH	—
Epiphyllum spp.	—	—	—	7	—
Epithelantha spp.	50	3	—	30	—
Ferocactus spp.	—	—	50	1,851 + 2 SH	—
Frailea spp.	—	60	30 SD	—	—
Grusonia spp.	—	—	—	5	—
Gymnocalycium spp.	—	—	1	—	—
Haageocereus spp.	—	—	1	—	—
Lemaireocereus spp.	—	—	15	3	1 SH
* Machaerocereus spp.	—	—	100	—	—
* Ritterocereus spp.	—	1	—	—	—
Leuchtenbergia spp.	—	—	2	—	—
Mammillaria spp.	250	1	606	41 + 79 SH	—
Melocactus spp.	—	—	165	—	—
Neolloydia spp.	—	—	—	3 SH	—
Neoporteria spp.	—	4	—	1	—
* Neochilenia spp.	—	15	—	—	—
Normanbokea spp.	50	—	—	—	—
Notocactus spp.	—	—	—	3	—
Opuntia spp.	—	24	1	21 + 1 SH	—
Oreocereus spp.	—	—	91	—	—
Pachycereus spp.	—	—	—	1 SH	—
Pediocactus spp.	20	—	—	—	—
Pelecyphora spp.	20	—	140	—	—
Pereskia spp.	—	—	—	2 SH	—
Rebutia spp.	—	—	4	—	—
Rhipsalidopsis spp.	—	—	—	1	—
Rhipsalis spp.	—	—	4	2	—
Stenocactus spp.	—	—	11	60 + 1 SH	—
Strombocactus spp.	—	—	1	4 SH	—
* Turbinicarpus spp.	—	—	4	1 SH	—
Sulcorebutia spp.	—	—	—	3 SH	—
Thelocactus spp.	—	—	—	4 + 2 SH	—
Trichocereus spp.	—	—	—	29	—
TOTALS	709	173	1,605 + 51,050 SD	3,243 + 110 SH	1 SH

* = synonym for preferred name listed directly above; spp. = unidentified species; SH = shipments; SD = seeds; all other numbers not designated as SH or SD represent numbers of plants.

Table 6

Cactus Seeds Reported as U.S. Exports or Imports, 1979 +

Codes	Scientific Name	1979 Commercial Exports	1979 Commercial Imports	Totals Weight	Totals Numbers	Totals Shipments
2	CACTACEAE (not specified)	2 LB 10 OZ		2 LB 10 OZ		
2	Ariocarpus spp.	51,000			51,000	
2 E	Ariocarpus fissuratus v. lloydii					
	* Ariocarpus lloydii	10,000	1 SH		10,000	1 SH
2 E	Ariocarpus kotschoubeyanus	20,000			20,000	
2 E	Ariocarpus trigonus	30,000			30,000	
2 E	Astrophytum capricorne		1 SH			1 SH
2 E	Astrophytum myriostigma		1 SH			1 SH
2 E	Cephalocereus leucocephalus	12 OZ		12 OZ		
2 E	Cephalocereus maxonii	1 LB 4 OZ		1 LB 4 OZ		
2 E	Cephalocereus militaris					
	* Pachycereus chrysomallus	1 LB 4 OZ		1 LB 4 OZ		
2 E	Cephalocereus senilis	1,000			1,000	
		+ 2 LB 7 OZ		2 LB 7 OZ		
2	Cereus peruvianus v. monstrosus	99,999			99,999	
2 E	Cereus schottii					
	* Lophocereus schottii		1 SH			1 SH
2 N	Cereus thurberi					
	* Lemaireocereus thurberi	1 LB 4 OZ		1 LB 4 OZ		
2 E	Echinocereus electracanthus	1 OZ		1 OZ		
2 E	Echinocereus grusonii	1 SH				1 SH
2 E	Echinocactus palmeri	1 LB 0 OZ	1 SH	1 LB 0 OZ		1 SH
2 N	Echinocactus polycephalus v. polycephalus					
	* Echinocactus polycephalus	30,000			30,000	
2 E	Echinocactus texensis					
	* Homalocephals texensis	70,000			70,000	
2 N	Echinocereus enneacanthus v. conglomeratus					
	* Echinocereus conglomeratus	4 OZ		4 OZ		
2 N	Echinocereus pectinatus v. neomexicanus					
	* Echinocereus dasyacanthus	5,000			5,000	
2 N	Echinocereus triglochidiatus v. gonacanthus					
	* Echinocereus gonacanthus	7,000			7,000	
2 E	Echinofossulocactus multicostatus					
	* Stenocactus multicostatus		1 SH			1 SH
2 N	Escontria chiotilla	4 OZ		4 OZ		
2 N	Ferocactus acanthodes v. acanthodes					
	* Ferocactus acanthodes	1 OZ		1 OZ		
2 N	Ferocactus covillei	6 OZ		6 OZ		
2 N	Ferocactus hamatacanthus					
	* Hamatocactus hamatacanthus	8 OZ		8 OZ		
2 E	Ferocactus latispinus	5,000			5,000	
2 E	Ferocactus pilosus					
	* Ferocactus pringlei	1 OZ		1 OZ		
2 E	Ferocactus recurvus					
	* Ferocactus nobilis	4 OZ		4 OZ		
2	Frailea spp.	50				

* = synonym for preferred name listed directly above; N = Native; SH = shipments; U = unverified name; LB = pound; OZ = ounce; E = exotic; 1 = Appendix I; 2 = Appendix II; spp. = unspecified species.

+There were no seeds reported as exports in 1977 or 1978.

Table 6 (Continued)

Cactus Seeds Reported as U.S. Exports or Imports, 1979 +

Codes	Scientific Name	1979 Commercial Exports	1979 Commercial Imports	Totals Weight	Totals Numbers	Totals Shipments
2	Gymnocactus mandragora	26,000			26,000	
2	Lemaireocereus victoriensis (U)	4 OZ		4 OZ		
2 E	Leuchtenbergia principis	33,000			33,000	
2 E	Mammillaria candida		1 SH			1 SH
2 E	Mammillaria columbiana	25,000			25,000	
2 E	Mammillaria elongata	5,000			5,000	
2 E	Mammillaria fuliginosa	5,000			5,000	
2 E	Mammillaria geminispina	1 OZ		1 OZ		
2 E	Mammillaria gigantea	1 OZ		1 OZ		
2 N	Mammillaria gummifera v. applanata					
	* Mammillaria heyderi	5,000			5,000	
2 N	Mammillaria lasiacantha	10,000			10,000	
2 N	Mammillaria melanocentra	5,000			5,000	
2 N	Mammillaria nejapensis	10,000			10,000	
2 E	Mammillaria spinosissima	99,999			99,999	
2 E	Mammillaria uncinata	17,000			17,000	
2	Melocactus disciformis (U)	10			10	
2 E	Melocactus melocactoides	5			5	
2 E	Myrtillocactus geometrizans	1 SH				1 SH
1 E	Obregonia denegrii		1 SH			1 SH
2 E	Pachycereus pecten-aboriginum	1 LB 0 OZ		1 LB 0 OZ		
2 E	Pachycereus pringlei	1 LB 0 OZ	1 SH	1 LB 0 OZ		1 SH
2 E	Parodia aureispina	5,000			5,000	
2 E	Parodia scopaoides	5,000			5,000	
2 E	Rathbunia alamosensis		1 SH			1 SH
2 N	Thelocactus bicolor	1,502	2 SH		1,502	2 SH
		+ 5 OZ		5 OZ		
2 E	Trichocereus spachianus	5,000			5,000	
2 E	Turbinicarpus pseudopectinatus					
	* Pelecyphora pseudopectinata	1,700			1,700	
	TOTALS	492,265	13 SH	15 LB 2 OZ	492,265	15 SH
		+ 15 LB 2 OZ				
		+ 2 SH				

* = synonym for preferred name listed directly above; N = Native; SH = shipments; U = unverified name; LB = Pound; OZ = ounce; E = exotic; 1 = Appendix I; 2 = Appendix II; spp.= unspecified species.

+ There were no seeds reported as exports in 1977 - 1978

Table 7

Exports and Imports of Cactus Species Listed or under Review for Listing under the U.S. Endangered Species Act

Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	Totals
Endangered Plant Species						
e2 N	Ancistrocactus tobuschii	—	—	4	—	4
e2 N	Pediocactus bradyi	2	2	58	—	62
e2 N	Pediocactus knowltonii	3	—	—	—	3
e2 N	Pediocactus sileri	2	—	—	—	2
e2 N	Sclerocactus wrightiae	1	—	—	—	1
	TOTAL ENDANGERED PLANTS	8	2	62	0	72
Threatened Plant Species						
t2 N	Coryphantha sneedii v. leei	—	—	—	—	—
	* Escobaria leei	—	6	—	—	6
t2 N	Neolloydia mariposensis	1	—	—	—	1
	* Echinocactus mariposensis	—	—	15	—	15
	* Echinomastus mariposensis	—	—	10	—	10
t2 N	Sclerocactus glaucus	—	—	—	—	—
	* Pediocactus glaucus	3	—	—	—	3
t2 N	Sclerocactus mesae-verdae	—	—	—	—	—
	* Pediocactus mesae-verdae	4	—	—	—	4
	TOTAL THREATENED PLANTS	8	6	25	0	39
Plant Species Under Review						
r2 N	Cereus greggii	—	—	—	—	—
	* Peniocereus greggii	—	—	3	—	3
r2 N	Cereus portoricensis	—	—	—	—	—
	* Harrisia portoricensis	—	—	11	—	11
r2 N	Epithelantha bokei	—	—	—	—	—
	* Epithelantha micromeris v. bokei	—	2	3	—	5
r2 N	Ferocactus eastwoodiae	—	—	—	—	—
	* Ferocactus acanthodes v. eastwoodiae	—	—	1	—	1
r2 N	Ferocactus viridescens #	—	—	1	—	1
r2 N	Mammillaria thornberi	5	—	3	—	8
r2 N	Neolloydia warnockii	1	—	—	—	1
r2 N	Pediocactus papyracanthus	—	—	4	—	4
	* Toumeya papyracantha	—	6	—	—	6
r2 N	Pediocactus paradinei	2	—	—	—	2
r2 N	Pediocactus peeblesianus v. fickeiseniae	3	—	—	—	3
r2 N	Rhipsalis baccifera	—	—	—	—	—
	* Rhipsalis cassutha	—	—	2	8	10
r2 N	Sclerocactus polyancistrus	4	—	—	—	4
	TOTAL PLANTS UNDER REVIEW	15	8	28	8	59
	TOTAL ALL PLANTS THIS TABLE	31	16	115	8	170

Also reported as commercial exports for 1979 are 100 plants of Ferocactus viridescens var. littoralis.

* = synonym for preferred name listed directly above; N = Native; 2 = Appendix II
e = endangered; t = threatened; r = under review.

Table 8

Cactus Species with 100 or more Specimens Reported as Exports or Imports, 1977-1979
Ranked Listing

Scientific Name	Number
Ariocarpus kotschoubeyanus	6,669
Turbinicarpus pseudopectinatus	6,666
Ariocarpus fissuratus var. lloydii	2,957
Ariocarpus agavoides	2,689
Astrophytum capricorne	1,893
Echinofossulocactus multicostatus	1,821
Mammillaria herrerae	1,720
Astrophytum myriostigma	1,542
Strombocactus disciformis	1,653
Epithelantha micromeris	1,650
Pelecyphora aselliformis	1,588
Pelecyphora strobiliformis	1,304
Ariocarpus retusus	1,295
Ariocarpus trigonus	1,196
Mammillaria elongata	1,170
Ariocarpus fissuratus	795
Strombocactus pseudomachrochele	752
Strombocactus schmiedicklanus	657
Mammillaria nejapensis	622
Mammillaria lenta	620
Ferocactus pilosus	602
Obregonia denegrii	572
Mammillaria pringlei	519
Turbinicarpus lophophoroides	506
Subpilocereus russellianus	500
Aztekium ritteri	482
Thelocactus bicolor	390
Echinocereus pectinatus var. neomexicanus	342
Lemaireocereus victoriensis(U)	341
Echinocactus asterias	335
Gymnocactus mandragora	332
Mammillaria candida	330
Astrophytum capricorne var. aureum	312
Ferocactus covillei	300
Echinocereus weinbergii	287

Scientific Name	Number
Thelocactus nidulans	270
Echinocactus texensis	269
Mammillaria muehlenpfordtii	252
Leuchtenbergia principis	230
Coryphantha dasyacantha	230
Echinocereus delaetii	230
Melocactus matanzanus	216
Epithelantha micromeris var. greggii	205
Neocardenasia herzogiana	201
Melocactus bahiensis	200
Astrophytum capricorne v. niveum	200
Astrophytum cohuilense	200
Cephalocereus senilis	161
Echinocactus grusonii	160
Ferocactus wislizenii	152
Mammillaria geminispina	141
Mammillaria polythele	140
Echinocactus horizonthalonius	137
Echinofossulocactus coptonogonus	129
Myrtillocactus geometrizans	122
Mammillaria albilanata	121
Mammillaria egregia	121
Mammillaria humboldtii	113
Mammillaria elegans	111
Turbinicarpus flaviflorus	110
Mammillaria coahuilensis	106
Coryphantha macromeris	102
Ferocactus gracilis	100
Ferocactus viridescens var. littoralis	100
Gymnocalycium horstii var. buinekeri	100
Lemaireocereus pruinosus	100
Echinocereus websterianus	100
Wilcoxia schmollii	100
Astrophytum capricorne v. senile	100

(U) unverified plant name (see McMahan, 1981 reference).

Table 9

Cactus Species with 100 or more Specimens Reported as Exports or Imports, 1977-1979

Alphabetical Listing

Scientific Name	Number
Ariocarpus agavoides	2,689
Ariocarpus fissuratus	795
Ariocarpus fissuratus var. lloydii	2,957
Ariocarpus kotschoubeyanus	6,669
Ariocarpus retusus	1,295
Ariocarpus trigonus	1,196
Astrophytum capricorne	1,893
Astrophytum capricorne v. niveum	200
Astrophytum capricorne v. senile	100
Astrophytum capricorne var. aureum	312
Astrophytum cohuilense	200
Astrophytum myriostigma	1,542
Aztekium ritteri	482
Cephalocereus senilis	161
Coryphantha dasyacantha	230
Coryphantha macromeris	102
Echinocactus asterias	335
Echinocactus grusonii	160
Echinocactus horizonthalonius	137
Echinocactus texensis	269
Echinocereus delaetii	230
Echinocereus pectinatus var. neomexicanus	342
Echinocereus websterianus	100
Echinocereus weinbergii	287
Echinofossulocactus coptonogonus	129
Echinofossulocactus multicostatus	1,821
Epithelantha micromeris	1,650
Epithelantha micromeris var. greggii	205
Ferocactus covillei	300
Ferocactus gracilis	100
Ferocactus pilosus	602
Ferocactus viridescens var. littoralis	100
Ferocactus wislizenii	152
Gymnocactus mandragora	332
Gymnocalycium horstii var. buineken	100
Lemaireocereus pruinosus	100
Lemaireocereus victoriensis(U)	341
Leuchtenbergia principis	230
Mammillaria albilanata	121
Mammillaria candida	330
Mammillaria coahuilensis	106
Mammillaria egregia	121
Mammillaria elegans	111
Mammillaria elongata	1,170
Mammillaria geminispina	141
Mammillaria herrerae	1,720
Mammillaria humboldtii	113
Mammillaria lenta	620
Mammillaria muehlenpfordtii	252
Mammillaria nejapensis	622
Mammillaria polythele	140
Mammillaria pringlei	519
Melocactus bahiensis	200
Melocactus matanzanus	216
Myrtillocactus geometrizans	122
Neocardenasia herzogiana	201
Obregonia denegrii	572
Pelecyphora aselliformis	1,588
Pelecyphora strobiliformis	1,304
Strombocactus disciformis	1,653
Strombocactus pseudomachrochele	752
Strombocactus schmiedicklanus	657
Subpilocereus russellianus	500
Thelocactus bicolor	390
Thelocactus nidulans	270
Turbinicarpus flaviflorus	110
Turbinicarpus lophophoroides	506
Turbinicarpus pseudopectinatus	6,666
Wilcoxia schmollii	100

(U) identifies a name unverified in McMahan, 1981 (see references).

APPENDIX

Data on Convention Plant Species Reported in Trade, 1977 - 1979.

Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2	CACTACEAE (all species)		876	754 + 2 LB 10 OZ SD	913,132 + 84 SH	51 + 1 SH
2 E	Acanthocalycium glaucum	1				
2	Acanthorhipsalis paranganiensis			9		
2	Akersia roseiflora		1			
2	Ancistrocactus spp.			1		
2 N	Ancistrocactus scheeri			12		
	* Ancistrocactus megarhizus			2		
	SPECIES TOTAL			(14)		
# 2 N	Ancistrocactus megarhizus SEE ANCISTROCACTUS SCHEERI					
e2 N	Ancistrocactus tobuschii			4		
2 E	Aporocactus flagelliformis			1		
# 2 E	Arequipa erectocylindrica SEE BORZICACTUS LEUCOTRICHUS					
# 2 E	Arequipa leucotricha SEE BORZICACTUS LEUCOTRICHUS					
2	Arequipa weingartiana			1	1	
2	Ariocarpus spp.	200		291 + 51,000 SD	53	
1 E	Ariocarpus agavoides					
	* Neogomesia agavoides			1,389	1,300	
	SPECIES TOTAL			(1,389)	(1,300)	

= See preferred name (all caps); * = synonym for a preferred name; N = Native; E = Exotic; H = Horticultural; e = endangered; t = threatened; r = under review; spp. = unspecified species; SD = seeds; SH = shipment(s); LB = pound; OZ = ounce; U = Unverified name.

Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2 N	Ariocarpus fissuratus			795		
2 E	Ariocarpus fissuratus v. lloydii			1,802		
	* Ariocarpus lloydii			210	945	
				+ 10,000 SD	+ 1 SH SD	
	VARIETY TOTAL			(2,012 + 10,000 SD)	(945 + 1 SH SD)	
# 2 E	Ariocarpus furfuraceus					
	SEE ARIOCARPUS RETUSUS					
2 E	Ariocarpus kotschoubeyanus			2,228	4,440	
				+ 20,000 SD		
	* Ariocarpus macdowellii			1		
	SPECIES TOTAL			(2,229 + 20,000 SD)	(4,440)	
# 2 E	Ariocarpus lloydii					
	SEE ARIOCARPUS FISSURATUS VAR. LLOYDII					
# 2 E	Ariocarpus macdowellii					
	SEE ARIOCARPUS KOTSCHOUBEYANUS					
2 E	Ariocarpus retusus			691	574	
	* Ariocarpus furfuraceus			30		
	SPECIES TOTAL			(721)	(574)	
1 E	Ariocarpus scaphorostrus			4		
2 E	Ariocarpus trigonus			996	200	
				+ 30,000 SD		
2	Arrojadoa aurlespina	13				
2 E	Arrojadoa rhodantha		2			
2	Astrophytum spp.			41	106	
					+ 1 SH	
# 2 E	Astrophytum asterias					
	SEE ECHINOCACTUS ASTERIAS					

= See preferred name (all caps); * = synonym for a preferred name; N = Native; E = Exotic; H = Horticultural; e = endangered; t = threatened; r = under review; spp. = unspecified species; SD = seeds; SH = shipment(s); LB = pound; OZ = ounce; U = Unverified name.

Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2 E	Astrophytum capricorne			593	1,300 + 1 SH SD	
2 H	Astrophytum capricorne v. aureum	2		310		
2	Astrophytum capricorne v. niveum			200		
2 H	Astrophytum capricorne v. senile			100		
2 E	Astrophytum cohuilense					
	* Astrophytum myriostigma v. cohuilense			200		
	SPECIES TOTAL			(200)		
2 E	Astrophytum myriostigma			516	1026 + 1 SH SD	
# 2 E	Astrophytum myriostigma v. cohuilense SEE ASTROPHYTUM COHUILENSE					
2 E	Astrophytum ornatum			2		
2	Astrophytum tamaulipensis (U)			2		
2	Astrophytum tulensis (U)			26		
2	Austrocactus patagonicus		2	5		
2	Austrocephalocereus albicephalus		33			1
# 2 E	Austrocylindropuntia salmiana SEE OPUNTIA SALMIANA					
# 2 E	Austrocylindropuntia teres SEE OPUNTIA TERES					
1 E	Aztekium ritteri			62	420	
2 E	Azureocereus hertlinglanus		6	6		
2	Azureocereus imperador (U)			1		

= See preferred name (all caps); * = synonym for a preferred name; N = Native; E = Exotic; H = Horticultural; e = endangered; t = threatened; r = under review; spp. = unspecified species; SD = seeds; SH = shipment(s); LB = pound; OZ = ounce; U = Unverified name.

Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2 E	Backebergia militaris			2		
2 E	Blossfeldia liliputana			1		
2 E	Borzicactus celzianus					
	* Oreocereus celsianus			3		
	SPECIES TOTAL			(3)		
2 E	Borzicactus doelzianus					
	* Morawetzia doelziana			3		
	SPECIES TOTAL			(3)		
2 E	Borzicactus hendricksonianus					
	* Oreocereus hendricksonianus		2	1		
	SPECIES TOTAL		(2)	(1)		
2 E	Borzicactus leucotrichus					
	* Arequipa leucotricha			2		
	SPECIES TOTAL			(2)		
2 E	Borzicactus madisoniorum					
	* Matacuna madisoniorum			2		
	SPECIES TOTAL			(2)		
2	Borzicactus tuberculatus			36		
2 E	Browningia candelaris				1	
2 E	Buingia brevicylindrica		9			
2 E	Buingia purpurea				1	
# 2 N	Carnegia gigantea					
	SEE CEREUS GIGANTEUS					
2	Cephalocereus spp.		24		757 + 1 SH	

= See preferred name (all caps); * = synonym for a preferred name; N = Native; E = Exotic; H = Horticultural; e = endangered; t = threatened; r = under review; spp. = unspecified species; SD = seeds; SH = shipment(s); LB = pound; OZ = ounce; U = Unverified name.

Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2 E	Cephalocereus chrysacanthus					
	* Pilosocereus chrysacanthus		11			
	SPECIES TOTAL		(11)			
2 E	Cephalocereus columna-trajani					
	* Cephalocereus hoppenstedtii			1		
	SPECIES TOTAL			(1)		
# 2 E	Cephalocereus hoppenstedtii					
	SEE CEPHALOCEREUS COLUMNA-TRAJANI					
2 E	Cephalocereus leucocephalus			12 OZ SD		
2 E	Cephalocereus leucostele					
	* Stephanocereus leucostele	7		50		
	SPECIES TOTAL	(7)		(50)		
2 E	Cephalocereus maxonii			1 LB 4 OZ SD	1 SH	
2 E	Cephalocereus militaris					
	* Pachycereus chrysomallus			1 LB 4 OZ SD		
	SPECIES TOTAL			(1 LB 4 OZ SD)		
2 E	Cephalocereus palmeri					
	* Pilosocereus palmeri		15			
	SPECIES TOTAL		(15)			
2 E	Cephalocereus pentaedrophorus	10				
2 E	Cephalocereus polylophus					
	* Neobuxbaumia polylopha		2	1		
	SPECIES TOTAL		(2)	(1)		
2 E	Cephalocereus senilis		1	134 + 1,000 SD + 2 LB 7 OZ SD	26 + 1 SH	
2	Cereus spp.	14				

# = See preferred name (all caps); * = synonym for a preferred name; N = Native; E = Exotic; H = Horticultural; e = endangered; t = threatened;
r = under review; spp. = unspecified species; SD = seeds; SH = shipment(s); LB = pound; OZ = ounce; U = Unverified name

Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
# 2 N	Cereus coccineus					
	SEE ECHINOCEREUS TRIGLOCHIDIATUS V. MELANACANTHUS					
2	Cereus crassisepalus		3			
2 E	Cereus forbesii			6		
	* Cereus huntingtonianus		23			
	SPECIES TOTAL		(23)	(6)		
2 N	Cereus giganteus					
	* Carnegia gigantea		2			
	SPECIES TOTAL		(2)			
2 N	Cereus grandiflorus v. grandiflorus					
	* Selenicereus grandiflorus				1	
	VARIETY TOTAL				(1)	
r2 N	Cereus greggii					
	* Peniocereus greggii			3		
	SPECIES TOTAL			(3)		
2 N	Cereus greggii v. greggii					
2 N	Cereus grenadensis		1			
# 2 E	Cereus huntingtonianus					
	SEE CEREUS FORBESII					
# 2 E	Cereus monstrosus					
	SEE CEREUS PERUVIANUS V. MONSTROSUS					
2 N	Cereus peruvianus				20 + 21 SH	
2	Cereus peruvianus v. monstrosus			99,999 SD		
	* Cereus monstrosus		11			
	VARIETY TOTAL		(11)	(99,999 SD)		

= See preferred name (all caps); * = synonym for a preferred name; N = Native; E = Exotic; H = Horticultural; e = endangered; t = threatened; r = under review; spp. = unspecified species; SD = seeds; SH = shipment(s); LB = pound; OZ = ounce; U = Unverified name.

Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
r2 N	Cereus portoricensis					
	* Harrisia portoricensis			11		
	SPECIES TOTAL			(11)		
2 N	Cereus schottii					
	* Lophocereus schottii				1 SH SD	
	SPECIES TOTAL				(1 SH SD)	
2 N	Cereus thurberi					
	* Lemaireocereus thurberi			1 LB 4 OZ SD		
	SPECIES TOTAL			(1 LB 4 OZ SD)		
2 N	Cereus trigonus					
	* Hylocereus trigonus			1	1 SH	
	SPECIES TOTAL			(1)	(1 SH)	
2 N	Cereus undatus					
	* Hylocereus undatus			1		
	SPECIES TOTAL			(1)		
2	Chamaecereus spp.				7	
2	Chamaecereus wotan (U)				1	
2	Cleistocactus spp.		2			
2	Cleistocactus reae			1		
2 E	Cleistocactus strausii			1		
2	Cleistocactus strausii v. fricii		16			
2 E	Cochemiea halei	2		1		
2 E	Cochemiea maritima	1				
2 E	Cochemiea pondii	1				

= See preferred name (all caps); * = synonym for a preferred name; N = Native; E = Exotic; H = Horticultural; e = endangered; t = threatened; r = under review; spp. = unspecified species; SD = seeds; SH = shipment(s); LB = pound; OZ = ounce; U = Unverified name.

Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2	Coleocephalocereus brevicylindricus			2		
2	Coleocephalocereus leutzelbur (U)		1			
2	Copiapoa spp.		23			
2	Copiapoa alticostata			1		
2	Copiapoa bridgesii			1		
2 E	Copiapoa cinerea		6	2		12
2	Copiapoa cinerea v. columna-alba			2		
2	Copiapoa cupreata		31 + 1 SH	1		12
2 E	Copiapoa dura					12
2 E	Copiapoa haseltoniana					12
2 E	Copiapoa humilis			3		
2	Copiapoa krainziana	1		2		
2	Copiapoa pepiniana			5		
2	Copiapoa pepiniana v. fiedleriana			2		
2	Copiapoa pseudocoquimbana			3		
2	Copiapoa tenuissima	13	1 SH			
2	Copiapoa wagenknechtii		31	1		
2	Corryocactus ayacuchoensis				1	
2 E	Corryocactus melanotrichus			1		

∅ = See preferred name (all caps); * = synonym for a preferred name; N = Native; E = Exotic; H = Horticultural; e = endangered; t = threatened; r = under review; spp. = unspecified species; SD = seeds; SH = shipment(s); LB = pound; OZ = ounce; U = Unverified name.

Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2	Coryphantha spp.			1	150 + 3 SH	
2 E	Coryphantha bergeriana		2		50	
2 E	Coryphantha chaffeyi					
	* Escobaria chaffeyi	1	6			
	SPECIES TOTAL	(1)	(6)			
# 2 E	Coryphantha clava					
	* SEE CORYPHANTHA OCTACANTHA					
2 N	Coryphantha cornifera			4		
2 N	Coryphantha dasyacantha					
	* Mammillaria dasyacantha			230		
	SPECIES TOTAL			(230)		
2 E	Coryphantha echinoidea			3		
2 E	Coryphantha elephantidens			1		
2 E	Coryphantha erecta			1		
2 E	Coryphantha georgii			2		
2 N	Coryphantha macromeris	2		100		
2	Coryphantha malz-tabiasensis			1		
2 N	Coryphantha missouriensis v. caespitosa					
	* Neobesseya similis			43		
	VARIETY TOTAL			(43)		
2 E	Coryphantha octacantha					
	* Coryphantha clava			15		
	SPECIES TOTAL			(15)		

= See preferred name (all caps); * = synonym for a preferred name; N = Native; E = Exotic; H = Horticultural; e = endangered; t = threatened; r = under review; spp. = unspecified species; SD = seeds; SH = shipment(s); LB = pound; OZ = ounce; U = Unverified name.

Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2	Coryphantha orcuttii	1				
2	Coryphantha organensis	1				
2 E	Coryphantha palmeri		2		61	
2 E	Coryphantha pectinifera					
	* Mammillaria pectinifera			1		
	SPECIES TOTAL			(1)		
2 E	Coryphantha poselgeriana		1	4		
†2 N	Coryphantha sneedii v. leei					
	* Escobaria leei		6			
	VARIETY TOTAL		(6)			
2 N	Coryphantha strobiliformis					
	* Escobaria tuberculosa		20	3		
	SPECIES TOTAL		(20)	(3)		
2 N	Coryphantha vivipara v. bisbeeana			11		
2 N	Coryphantha vivipara v. neomexicana			10		
2 N	Coryphantha vivipara v. radiosa	6				
2	Cumarinia odorata			3		
2 E	Denmoza erythrocephalus			1		
2	Discocactus spp.				4	
2 E	Discocactus albispinus				5	
2	Discocactus araneispinus				5	
2 E	Discocactus boliviensis				4	

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2	Discocactus curanbaensis (U)				4	
2	Discocactus estevesii				3	
2	Discocactus griseus				6	
2	Discocactus horichii			11		
2	Discocactus horstii				4	
2	Discocactus lankesteri (U)			13		
2	Discocactus mutuensis (U)				4	
2 E	Discocactus placentiformis			1	2	
2	Discocactus rapirhizus (U)				4	
2 E	Discocactus tricornis		1	1		
2	Echinocactus spp.		12		1 + 1 SH	
2 N	Echinocactus asterias					
	* Astrophytum asterias			335		
	SPECIES TOTAL			(335)		
2 E	Echinocactus electracanthus			4 + 1 OZ SD		
2 E	Echinocactus grusonii			160 + 1 SH SD	1 SH SD	
2 N	Echinocactus horizonthalonius		1	136		
# 2 N	Echinocactus mariposensis					
	SEE NEOLLOYDIA MARIPOSENSIS					

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
# 2 N	Echinocactus mesae-verdae					
	SEE SCLEROCACTUS MESAE-VERDAE					
2 E	Echinocactus palmeri			1 LB SD	1 SH SD	
2	Echinocactus parryi			2		
# 2 N	Echinocactus polycephalus					
	SEE ECHINOCACTUS POLYCEPHALUS V. POLYCEPHALUS					
2 N	Echinocactus polycephalus v. polycephalus					
	* Echinocactus polycephalus			30,000 SD		
	VARIETY TOTAL			(30,000 SD)		
2 N	Echinocactus texensis					
	* Homalocephala texensis			269 + 70,500 SD		
	SPECIES TOTAL			(269 + 70,500 SD)		
2	Echinocereus spp.	80	4	75	1 + 2 SH	
# 2 E	Echinocereus amoenus					
	SEE ECHINOCEREUS PULCHELLUS V. AMOENUS					
2 E	Echinocereus aclfer			10	40	
2 E	Echinocereus adustus	1				
2	Echinocereus chimorimis (U)		1			
2 N	Echinocereus chloranthus			8		
# 2 N	Echinocereus coccineus					
	SEE ECHINOCEREUS TRIGLOCHIDIATUS V. MELANACANTHUS					
# 2 E	Echinocereus conglomeratus					
	SEE ECHINOCEREUS ENNEACANTHUS V. CONGLOMERATUS					

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
# 2 N	Echinocereus dasyacanthus					
	SEE ECHINOCEREUS PECTINATUS V. NEOMEXICANUS					
2 E	Echinocereus delaetii			230		
# 2 N	Echinocereus engelmannii					
	SEE ECHINOCEREUS ENGELMANNII V. ENGELMANNII					
2 N	Echinocereus engelmannii v. engelmannii					
	* Echinocereus engelmannii			1		
	VARIETY TOTAL			(1)		
2 N	Echinocereus enneacanthus v. conglomeratus					
	* Echinocereus conglomeratus			4 OZ SD		
	VARIETY TOTAL			(4 OZ SD)		
# 2 N	Echinocereus fendleri					
	SEE ECHINOCEREUS FENDLERI V. FENDLERI					
2 N	Echinocereus fendleri v. fendleri					
	* Echinocereus fendleri			1		
	VARIETY TOTAL			(1)		
2 N	Echinocereus fendleri v. rectispinus			10		
# 2 N	Echinocereus gonacanthus					
	SEE ECHINOCEREUS TRIGLOCHIDIATUS V. GONACANTHUS					
2 E	Echinocereus knippelianus		44	2	50	
2	Echinocereus lauii		2	1		
2 E	Echinocereus longisetus			3		
2	Echinocereus nivosus			8		

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2	Echinocereus crenulata(crenulata?) v. crest (U)		1			
2 N	Echinocereus pectinatus		2	3		
2 N	Echinocereus pectinatus v. minor					
	* Echinocereus roetteri			2		
	VARIETY TOTAL			(2)		
2 N	Echinocereus pectinatus v. neomexicanus					
	* Echinocereus dasyacanthus			342		
				+ 5,000 SD		
	VARIETY TOTAL			(342 + 5,000 SD)		
2 N	Echinocereus pentalophus			1		
2	Echinocereus primolanatus			46		
2 E	Echinocereus pulchellus v. amoenus					
	* Echinocereus amoenus		1			
	VARIETY TOTAL		(1)			
# 2 N	Echinocereus rosmeri					
	SEE ECHINOCEREUS TRIGLOCHIDIATUS V. MELANACANTHUS					
# 2 N	Echinocereus roetteri					
	SEE ECHINOCEREUS PECTINATUS V. MINOR					
# 2 N	Echinocereus rosei					
	SEE ECHINOCEREUS TRIGLOCHIDIATUS V. NEOMEXICANUS					
2 E	Echinocereus sciurus			1		
# 2 N	Echinocereus triglochidiatus					
	SEE ECHINOCEREUS TRIGLOCHIDIATUS V. TRIGLOCHIDIATUS					
2 N	Echinocereus triglochidiatus v. gonacanthus					
	* Echinocereus gonacanthus			7,000 SD		
	VARIETY TOTAL			(7,000 SD)		

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2 N	Echinocereus triglochidiatus v. melanacanthus					
	* Echinocereus coccineus		2			
	* Echinocereus roemeri		35			
	VARIETY TOTAL		(37)			
2 N	Echinocereus triglochidiatus v. neomexicanus					
	* Echinocereus rosei			2		
	VARIETY TOTAL			(2)		
2 N	Echinocereus triglochidiatus v. triglochidiatus					
	* Echinocereus triglochidiatus		2	2		
	VARIETY TOTAL		(2)	(2)		
2 E	Echinocereus websterianus			100		
2 E	Echinocereus weinbergii			79	208	
2 E	Echinofossulocactus albatus					
	* Stenocactus albatus			20	65	
	SPECIES TOTAL			(20)	(65)	
2 E	Echinofossulocactus coptonogonus					
	* Stenocactus coptonogonus			54	75	
	SPECIES TOTAL			(54)	(75)	
2 E	Echinofossulocactus erectocentrus			3		
2	Echinofossulocactus kellerianus			1		
2 E	Echinofossulocactus multicostatus					
	* Stenocactus multicostatus			71	1,750 + 1 SH SD	
	SPECIES TOTAL			(71)	(1,750 + 1 SH SD)	
2 E	Echinofossulocactus tricuspidatus			3		
2 E	Echinofossulocactus zacatecasensis		1			

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
# 2 N	Echinomastus intertextus SEE NEOLLOYDIA INTERTEXTA					
# 2 N	Echinomastus johnsonii SEE NEOLLOYDIA JOHNSONII					
# 2 N	Echinomastus mariposensis SEE NEOLLOYDIA MARIPOSENSIS					
# 2 E	Echinomastus unquispinus SEE NEOLLOYDIA UNGUISPINA					
2	Echinopsis spp.				106	
2	Echinopsis bruchii				1	
2	Echinopsis crassicaulis (U)				3	
2	Echinopsis ericiflora (U)		12			
2	Echinopsis franeaii (U)	4				
2	Echinopsis lageneaformis (U)				2	
2 E	Echinopsis obrepanda				1	
2 E	Echinopsis oxygona				2	
2	Echinopsis rauschii v. megalocephala				5	
2 E	Echinopsis shaferi		1			
2	Encephalocarpus spp.	25			2 SH	
# 2 E	Encephalocarpus strobiliformis SEE PELECYPHORA STROBILIFORMIS					

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2	Epiphyllum spp.				7	
					+ 1 SH	
2 E	Epiphyllum chrysocardium			2		
2	Epiphyllum ignescens (U)				1	
2 E	Epiphyllum lepidocarpum			13		
2	Epithelantha spp.	50	3		30	
r2 N	Epithelantha bokei					
	* Epithelantha micromeris v. bokei		2	3		
	SPECIES TOTAL		(2)	(3)		
2	Epithelantha kellerianus (U)		1			
2 N	Epithelantha micromeris			700	750	
	* Mammillaria micromeris				200	
	SPECIES TOTAL			(700)	(950)	
# 2 N	Epithelantha micromeris v. bokei					
	SEE EPITHELANTHA BOKEI					
2 E	Epithelantha micromeris v. greggii			205		
2	Epithelantha pentacanthus (U)		1			
# 2 E	Escobaria chaffeyi					
	SEE CORYPHANTHA CHAFFEYI					
2	Escobaria henricksonii		1			
# 2 N	Escobaria leei					
	SEE CORYPHANTHA SNEEDII V. LEEI					

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2	Escobaria orcuttii v. koenigii		20	2		
2	Escobaria organensis		4			
# 2 N	Escobaria tuberculosa SEE CORYPHANTHA STROBILIFORMIS					
2 N	Escontria chiotilla			6 + 4 OZ SD		
2	Espostoa baumannii			1		
2	Espostoa churinensis (U)			1		
2	Espostoa huanucensis (U)		1			
2	Espostoa hylaea			1		
2 E	Espostoa lanata			2		
2	Espostoa laticornua				1 SH	
2 E	Espostoa melanostele			1		
2	Espostoa melanostele v. inermis			1		
2	Espostoa melanostele v. lo (U)			1		
2	Espostoa procera				1 SH	
2	Espostoa ritteri			25	1 SH	
2 E	Espostoa ulei * Facheiroa ulei SPECIES TOTAL		8 (8)			
2 E	Eulychnia acida			1		12
2	Eulychnia ritteri				1	

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2 E	Eulychnia saint-pieana					12
2 E	Eulychnia spinibarbis			1		12
# 2 E	Fachelroa ulei SEE ESPOSTOA ULEI					
2	Ferocactus spp.			50	1,851 + 2 SH	
# 2 N	Ferocactus acanthodes SEE FEROCACTUS ACANTHODES V. ACANTHODES					
2 N	Ferocactus acanthodes v. acanthodes					
	* Ferocactus acanthodes			11 + 1 OZ SD		
	VARIETY TOTAL			(11 + 1 OZ SD)		
# 2 N	Ferocactus acanthodes v. eastwoodiae SEE FEROCACTUS EASTWOODIAE					
2 E	Ferocactus alamosanus			1		
2 N	Ferocactus covillei			300 + 6 OZ SD		
r2 N	Ferocactus eastwoodiae					
	* Ferocactus acanthodes v. eastwoodiae			1		
	SPECIES TOTAL			(1)		
2 E	Ferocactus gatesii		2	1		
2 E	Ferocactus glaucescens		1	8		
2 E	Ferocactus gracilis			100		
2 E	Ferocactus gracilis v. coloratus			2		

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2 N	Ferocactus hamatacanthus					
	* Hamatocactus hamatacanthus			8 OZ SD		
	SPECIES TOTAL			(8 OZ SD)		
2 E	Ferocactus herrerae			1		
2 E	Ferocactus histrix		2			
2 E	Ferocactus latispinus			38	50	
				+ 5,000 SD		
# 2 E	Ferocactus nobilis					
	SEE FEROCACTUS RECURVUS					
2 E	Ferocactus orcuttii			1		
2 E	Ferocactus pilosus					
	* Ferocactus pringlei			601		
				+ 1 OZ SD		
	* Ferocactus stainsii			1		
	SPECIES TOTAL			(602 + 1 OZ SD)		
# 2 E	Ferocactus pringlei					
	SEE FEROCACTUS PILOSUS					
2 E	Ferocactus recurvus					
	* Ferocactus nobilis		1	4 OZ SD		
	SPECIES TOTAL		(1)	(4 OZ SD)		
# 2 E	Ferocactus stainsii					
	SEE FEROCACTUS PILOSUS					
r2 N	Ferocactus viridescens			1		
2	Ferocactus viridescens v. littoralis			100		
2 N	Ferocactus wislizenii			152		
2	Frailea spp.		60	50 SD		

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2	Frailea asterioides				1	
2	Frailea asterioides				1	
2	Frailea magnifica (U)			1		
2	Glandulicactus crassigibbus(crassibiggus?) (U)		1			
2	Grusonia spp.				5	
2 E	Grusonia bradtiana			1		
2	Gymnocactus aquirreanus			1		
2	Gymnocactus mandragora			332 + 26,000 SD	1 SH	
2	Gymnocactus roseanus	2				
2	Gymnocactus roseanus hellocn (U)			1		
2	Gymnocactus subterraneus v. subterraneus (U)			6		
2	Gymnocactus subterraneus v. k (U)			2		
# 2 E	Gymnocactus subterraneus v. zaragosae SEE NEOLLOYDIA SUBTERRANEA					
2	Gymnocactus vlaeckii		1	5		
2	Gymnocalycium spp.			1		
2	Gymnocalycium albispinum			1		
2	Gymnocalycium chiquitanum			1		
2 E	Gymnocalycium damsii		1			
2	Gymnocalycium damsii v. rotundulum		1	1		

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2	Gymnocalycium horstii v. buenekeri			100		
2	Gymnocalycium lagunillasense				1 SH	
2 E	Gymnocalycium megalotheles			1		
2 E	Gymnocalycium mihanovichii			1		
2	Gymnocalycium subterraneus (U)			3		
2	Haageocereus spp.			1		
2	Haageocereus acanthocladus			1		
2	Haageocereus albispinus		1			
2	Haageocereus aurelspinus			1		
2	Haageocereus cantaensis (U)			1		
2	Haageocereus centrispinus (U)			1		
2	Haageocereus chrysacanthus			1		
2	Haageocereus dichromus			1		
2	Haageocereus fortalezensis (U)			1		
2	Haageocereus horrens			2		
2	Haageocereus litoralis			1		
2	Haageocereus pseudomelanostele			1		
2	Haageocereus seticeps			1		
2	Haageocereus turbidus			1		

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
# 2 N	Hamatocactus hamatacanthus					
	SEE FEROCACTUS HAMATACANTHUS					
2 N	Hamatocactus uncinatus			61		
# 2 N	Harrisia portoricensis					
	SEE CEREUS PORTORICENSIS					
2 E	Hatiora salicornioides			1		
2 E	Hellocereus speciosus				1	
# 2 N	Homalocephala texensis					
	SEE ECHINOCACTUS TEXENSIS					
2 E	Horridocactus andicola					12
2	Horridocactus mollensis (U)					12
2	Horridocactus robustus					12
2 E	Hylocereus lemairei			28		
# 2 N	Hylocereus trigonus					
	SEE CEREUS TRIGONUS					
# 2 N	Hylocereus undatus					
	SEE CEREUS UNDATUS					
# 2 E	Islaya minor					
	SEE NEOPORTERIA ISLAYENSIS F. MINOR					
2	Lemaireocereus spp.			15	3	1 SH
	* Machaerocereus spp.			100		
	* Ritterocereus spp.		1			
	GENUS TOTAL		(1)	(115)	(3)	(1 SH)

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2 E	Lemaireocereus eruca					
	* Machaerocereus eruca		1	1		
	SPECIES TOTAL		(1)	(1)		
2 E	Lemaireocereus euphorbioides					
	* Neobuxbaumia euphorbioides		3			
	SPECIES TOTAL		(3)			
2 E	Lemaireocereus hollianus		15		1	
2 E	Lemaireocereus marginatus		2	1	1 SH	
2 E	Lemaireocereus pruinosus		100			
# 2 N	Lemaireocereus thurberi					
	SEE CEREUS THURBERI					
2	Lemaireocereus victoriensis (U)			341 + 4 OZ SD		
2	Leuchtenbergia spp.			2		
2 E	Leuchtenbergia principis		100	130 + 33,000 SD		
2 E	Lobivia backebergii		1			
2 E	Lobivia cariquinensis		1			
# 2 E	Lobivia denispina					
	SEE LOBIVIA FAMATIMENSIS V. DENISPINA					
2 E	Lobivia famatimensis v. denispina					
	* Lobivia denispina			2		
	VARIETY TOTAL			(2)		
2 E	Lobivia leucomalla		2		1	

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2 E	Lobivia pygmaea					
	* Rebutia pygmaea			2		
	SPECIES TOTAL			(2)		
# 2 N	Lophocereus schottii					
	SEE CEREUS SCHOTTII					
2 N	Lophocereus schottii f. monstrosus			4		
2	Loxanthocereus eulalianus			3		
# 2	Machaerocereus spp.					
	SEE LEMAIREOCEREUS spp.					
# 2 E	Machaerocereus eruca					
	SEE LEMAIREOCEREUS ERUCA					
2 E	Malacocarpus maassii					
	* Parodia maassii		1			
	SPECIES TOTAL		(1)			
2	Mammillaria spp.	250	1	606	41 + 79 SH	
2	Mammillaria aguirei (U)			12		
2 E	Mammillaria albicoma		2			
2	Mammillaria albiflora				1 SH	
2 E	Mammillaria albilanata			21	100	
2	Mammillaria albilanata v. cae (U)				1	
2	Mammillaria anecies (U)				1	
2 E	Mammillaria arida			53		

Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2	Mammillaria aurihamata (U)		2			
2	Mammillaria barkeri		2			
2 H	Mammillaria bocasana v. inermis		4	1		
2	Mammillaria bocasana v. multihamata			1	1	
2 E	Mammillaria bocensis		21			
2 E	Mammillaria bucareliensis		2			
2 E	Mammillaria camptotricha			5		
2 E	Mammillaria candida		1	133	196 + 1 SH SD	
2 E	Mammillaria carnea		1			
2	Mammillaria casptoxica (U)		12			
2 E	Mammillaria celsiana			1		
∅ 3 E	Mammillaria centricirrha SEE MAMMILLARIA MAGNIMAMMA					
2 E	Mammillaria coahuilensis	4		102		
2 E	Mammillaria columbiana			25,000 SD		
2 E	Mammillaria compressa			2		
∅ 2 N	Mammillaria dasyacantha SEE CORYPHANTHA DASYACANTHA					
2 E	Mammillaria decipiens			2		

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2	Mammillaria duoformis		2			
2 E	Mammillaria echinaria			1		
2	Mammillaria egregia			121		
2 E	Mammillaria elegans		50			
	* Mammillaria potosiana			61		
	SPECIES TOTAL		(50)	(61)		
2 E	Mammillaria elongata			1,100 + 5,000 SD	70	
2	Mammillaria ernestii		1			
2 E	Mammillaria fuliginosa			5,000 SD		
2 E	Mammillaria geminispina			101 + 1 OZ SD	40	
2 E	Mammillaria gigantea			1 OZ SD		
2 E	Mammillaria glassii		2		1	
2	Mammillaria glassii v. ascensionis			1		
2 E	Mammillaria glochidiata			1		
2 E	Mammillaria goldii		59	5		
2 E	Mammillaria guerreronis			1		
2 N	Mammillaria gummifera v. applanata					
	* Mammillaria heyderi			5,000 SD		
	VARIETY TOTAL			(5,000 SD)		
2	Mammillaria gummiliong maxillis (U)		3			

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2 E	Mammillaria hahniana		2			
2	Mammillaria haudeana			4		
# 2 N	Mammillaria heyderi SEE MAMMILLARIA GUMMIFERA V. APPLANATA					
2 E	Mammillaria herrerae			1,120	600	
2 E	Mammillaria hertrichiana			1		
# 2 E	Mammillaria hidalgensis SEE MAMMILLARIA POLYTHELE					
2 E	Mammillaria hoffmanniana		33	1		
2	Mammillaria huajuapensis			1		
2 E	Mammillaria humboldtii			113		
2 E	Mammillaria insularis			1		
2	Mammillaria kilysingisaurdista (U)		6			
2 E	Mammillaria knebeliana			1		
2 E	Mammillaria lanata				1	
2 N	Mammillaria lasiacantha			10,000 SD		
2 E	Mammillaria lenta			320	300	
2	Mammillaria macrocarpa (U)			6		
2 E	Mammillaria magnimamma		1	1		
	* Mammillaria centricirrha			1		
	SPECIES TOTAL		(1)	(2)		

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2	Mammillaria mathildae		1	54		
2 E	Mammillaria mazatlanensis				1 SH	
2 N	Mammillaria melanocentra			5,000 SD		
2	Mammillaria meyranii			1		
2 N	Mammillaria microcarpa			35		
# 2 N	Mammillaria micromeris SEE EPITHELANTHA MICROMERIS					
2	Mammillaria mollendorffiana			1		
2 E	Mammillaria muehlenpfordtii					
	* Mammillaria neopotosina		2		250	
	SPECIES TOTAL		(2)		(250)	
2	Mammillaria nana			1	1	
2 E	Mammillaria napina				1 SH	
2 N	Mammillaria nejapensis		2	380 + 10,000 SD	250	
# 2 E	Mammillaria neopotosina SEE MAMMILLARIA MUEHLENPFORDTII					
2 N	Mammillaria nivosa		13			
2 E	Mammillaria obscura			2		
	* Mammillaria wagneriana			2		
	SPECIES TOTAL			(4)		
2 E	Mammillaria ocotillensis		3			
2 E	Mammillaria ortegae		1			

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
∅ 2 E	Mammillaria pectinifera					
	SEE CORYPHANTHA PECTINIFERA					
2 E	Mammillaria pennispinosa		1	2		
2 E	Mammillaria perbella			1		
2 E	Mammillaria petterssonii			48		
2	Mammillaria pilmlja (U)		12			
2 E	Mammillaria plumosa			3		
2 E	Mammillaria polythele					
	* Mammillaria hidalgensis			100	40	
	SPECIES TOTAL			(100)	(40)	
∅ 2 E	Mammillaria potosiana					
	SEE MAMMILLARIA ELEGANS					
2 E	Mammillaria pringlei			119	400	
2 E	Mammillaria ruestii		2		14	
2 E	Mammillaria saboae		2	9		
2 E	Mammillaria schiedeana		12			
2	Mammillaria sphacelata v. viperina (U)			1		
2 E	Mammillaria spinosissima		1	99,999 SD		
2 E	Mammillaria surculosa			2		
2 E	Mammillaria teiabergiana	14		1		
2 E	Mammillaria tesopecensis			1		

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2 N	Mammillaria tetrancistra	4				
2 E	Mammillaria theresae				1 SH	
r2 N	Mammillaria thornberi	5		3		
2 E	Mammillaria uncinata			10 + 17,000 SD		
# 2 E	Mammillaria wagneriana SEE MAMMILLARIA OBSCURA					
2 E	Mammillaria wildii			2		
2 E	Mammillaria wildii v. cristata				1	
2 E	Mammillaria winterae			1		
2 N	Mammillaria wrightii				1	
2 E	Mammillaria yucatanensis		2			
2 E	Mammillaria zeyeriana			2		
2 E	Marenopuntia marenae * Melocactus delessertianus SPECIES TOTAL			2 (2)		
2	Matacuna aurantiaca			1		
2	Matacuna aureiflora			2		
# 2 E	Matacuna madisoniorum SEE BORZICACTUS MADISONIORUM					
2	Matacuna grandiflora (U)			1		
2	Matacuna paucicostata		3	1		

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2 E	Matacuna ritteri		3	2		
2	Matacuna tuberculata (U)		3			
2	Mediolobivia haefneriana				1 SH	
2	Mediolobivia ritteri				1 SH	
2	Melocactus spp.			165		
2 E	Melocactus azureus		12	1		
2 E	Melocactus bahiensis			200		
2 E	Melocactus broadwayii			10		
2 E	Melocactus caesius			1		
2 E	Melocactus curvispinus			2		
2	Melocactus dawsonii		4	2		
# 2 E	Melocactus delessertianus SEE MARENOPUNTIA MARENAE					
2	Melocactus disciformis (U)			1 + 10 SD		
2	Melocactus guiarti			18		
2 E	Melocactus harlowii			1		
2 N	Melocactus intortus v. antonii			1		
2 E	Melocactus matanzanus		8	208		
2 E	Melocactus maxonii			1		

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2 E	Melocactus melocactoides		4	1 + 5 SD		
2 E	Melocactus obtusipetalus		8	11		
2 E	Melocactus townsendianus			1		
2	Micranthocereus auriazureus (U)					2
# 2 E	Morawetzia doelziana SEE BORZICACTUS DOELZIANUS					
2	Morawetzia sericata			1		
2 E	Myrtillocactus geometrizans	16	106	1 SH SD		
# 2 N	Neobesseya similis SEE CORYPHANTHA MISSOURIENSIS V. CAESPITOSA					
2	Neobinghamia climaxantha			3		
# 2 E	Neobuxbaumia euphorbioides SEE LEMAIREOCEREUS EUPHORBIOIDES					
# 2 E	Neobuxbaumia polylopha SEE CEPHALOCEREUS POLYLOPHUS					
2 E	Neocardenasia herzogiana			201		
# 2	Neochilenia spp. SEE NEOPORTERIA SPP.					
# 2 E	Neochilenia chilensis SEE NEOPORTERIA CHILENSIS					
2	Neochilenia esmeraldana		1			
# 2 E	Neochilenia napina SEE NEOPORTERIA NAPINA					

Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2	Neochilenia paucicostata			1		
# 2 E	Neochilenia reichi					
	SEE NEOPORTERIA REICHEI					
# 2 E	Neogomesia agavoides					
	SEE ARIOCARPUS AGAVOIDES					
2	Neolloydia spp.				3 SH	
2 N	Neolloydia intertexta					
	* Echinomastus intertextus			4		
	SPECIES TOTAL			(4)		
2 N	Neolloydia johnsonii	2				
	* Echinomastus johnsonii			1		
	SPECIES TOTAL	(2)		(1)		
†2 N	Neolloydia mariposensis	1				
	* Echinocactus mariposensis			15		
	* Echinomastus mariposensis			10		
	SPECIES TOTAL	(1)		(25)		
2	Neolloydia smithii (U)	2				
2 E	Neolloydia subterranea					
	* Gymnocactus subterraneus v. zaragosae			2		
	SPECIES TOTAL			(2)		
2 E	Neolloydia unguispina					
	* Echinomastus unguispinus				20	
	SPECIES TOTAL				(20)	
r2 N	Neolloydia warnockii	1				
2	Neoporteria spp.		4		1	
	* Neochilenia spp.		15			
	GENUS TOTAL		(19)		(1)	

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2 E	Neoporteria chilensis					
	* Neochilenia chilensis					12
	SPECIES TOTAL					(12)
2	Neoporteria intermedia					12
2 E	Neoporteria islayensis f. minor					
	* islaya minor		2			
	FORM TOTAL		(2)			
2	Neoporteria litoralis		2			
2 E	Neoporteria multicolor		1	1	1	
2 E	Neoporteria napina					
	* Neochilenia napina		1	1		
	SPECIES TOTAL		(1)	(1)		
2 E	Neoporteria reichei					
	* Neochilenia reichei			1		
	SPECIES TOTAL			(1)		
2 E	Neoporteria subgibbosa					12
2	Neoraimondia roseiflora				1	
2	Neowerdermannia chilensis				1 SH	
2	Normanbokea spp.	50				
2	Normanbokea cristata (U)			50		
ß 2 E	Normanbokea valdeziana					
	SEE TUBINICARPUS VALDEZIANUS					
ß 2 E	Normanbokea pseudopectinata					
	SEE TUBINICARPUS PSEUDOPECTINATUS					

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2	Notocactus spp.				3	
2	Notocactus allosiphon			3		
2 E	Notocactus buiningii			1		
2	Notocactus claviceps			1		
2	Notocactus cobrensis (U)			1		
2 E	Notocactus concinnus			1		
2 E	Notocactus haselbergii			2		
2	Notocactus horstii		3			
2 E	Notocactus leninghausii		12	29		
2	Notocactus magnificus		12	4		
2	Notocactus megapotamicus		1			
2 E	Notocactus mueller-melchersii			1		
2	Notocactus neobuenekeri (U)		2	1		
2	Notocactus purpureus				1 SH	
2	Notocactus rubrispinus (U)				1 SH	
2 E	Notocactus scopa			1		
2	Notocactus tenuicylindricus				1 SH	
2	Notocactus uebelmannianus (U)		2			
2	Notocactus vanvlietii				1 SH	

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2	Notocactus werdermannianus			1		
2 E	Nyctocereus oaxacensis			1		
1 E	Obregonia denegrii			572	1 SH SD	
2	Opuntia spp.		24	1	21 + 1 SH	
2 E	Opuntia articulata v. diademata					
	* Tephrocactus articulatus v. diadematus		12	1		
	VARIETY TOTAL		(12)	(1)		
2 E	Opuntia articulata v. inermis					
	* Tephrocactus articulatus v. inermis			1		
	* Opuntia strobiliformis		12	1		
	VARIETY TOTAL		(12)	(2)		
∅ 2 N	Opuntia bigelovii					
	SEE OPUNTIA BIGELOVII V. BIGELOVII					
2 N	Opuntia bigelovii v. bigelovii					
	* Opuntia bigelovii			1		
	VARIETY TOTAL			(1)		
2 N	Opuntia echinocarpa v. echinocarpa					
	* Opuntia echinocarpa			1		
	VARIETY TOTAL			(1)		
2 N	Opuntia erinacea v. utahensis			1		
2 E	Opuntia floccosa					
	* Tephrocactus floccosus			2		
	SPECIES TOTAL			(2)		
∅ 2 N	Opuntia fragilis					
	SEE OPUNTIA FRAGILIS V. FRAGILIS					

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2 N	Opuntia fragilis v. fragilis					
	* Opuntia fragilis			1		
	VARIETY TOTAL			(1)		
2 E	Opuntia littoralis v. vaseyi					
	* Tephrocactus covillei					22
	VARIETY TOTAL					(22)
2 N	Opuntia macrorhiza v. macrorhiza					
	* Opuntia tortispina			1		
	VARIETY TOTAL			(1)		
2 N	Opuntia rubescens			3		
2 E	Opuntia salmiana					
	* Austrocylindropuntia salmiana			1		
	SPECIES TOTAL			(1)		
# 2 E	Opuntia strobiliformis					
	SEE OPUNTIA ARTICULATA V. INERMIS					
2 E	Opuntia teres					
	* Austrocylindropuntia teres			1		
	SPECIES TOTAL			(1)		
# 2 N	Opuntia tortispina					
	SEE OPUNTIA MACRORHIZA V. MACRORHIZA					
2 H	Opuntia vulgaris cv. variegata			3		
2	Oreocereus spp.			91		
# 2 E	Oreocereus celsianus					
	SEE BORZICACTUS CELSIANUS					
2	Oreocereus densilanatus (U)			1		

Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
# 2 E	Oreocereus hendricksenianus SEE BORZICACTUS HENDRICKSENIANUS					
2	Ortegocactus macdougalii	1		1		
2	Pachycereus spp.				1 SH	
# 2 E	Pachycereus chrysomallus SEE CEPHALOCEREUS MILITARIS					
2 E	Pachycereus orcuttii			1		
2 E	Pachycereus pecti-aboriginum			1 LB SD		
2 E	Pachycereus pringlei			1 LB SD	1 SH SD	
2 E	Parodia aurelspina			1 + 5,000 SD		
2	Parodia brevihamata			7		
2	Parodia buenekeri		1			
2 E	Parodia chrysacanthion		10			
# 2 E	Parodia maassii SEE MALACOCARPUS MAASII					
2 E	Parodia scopaoides			5,000 SD		
2	Parodia st.pleana (U)		1			
2	Pediocactus spp.	20				
e2 N	Pediocactus bradyi	2	2	58		
# 2 N	Pediocactus glaucus SEE SCLEROCACTUS GLAUCUS					

Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
e2 N	Pediocactus knowltonii	3				
# 2 N	Pediocactus mesae-verdae SEE SCLEROCACTUS MESAE-VERDAE					
r2 N	Pediocactus papyracanthus			4		
	* Toumeya papyracantha		6			
	SPECIES TOTAL		(6)	(4)		
r2 N	Pediocactus paradinei	2				
2 N	Pediocactus peeblesianus					
r2 N	Pediocactus peeblesianus v. fickeiseniae	3				
e2 N	Pediocactus sileri	2				
2 N	Pediocactus simpsonii v. minor	2				
2	Pediocactus valdezianus (U)		1			
2	Pelecyphora spp.	20		140		
1 E	Pelecyphora aselliformis			964	624	
# 2 E	Pelecyphora pseudopectinata SEE TURBINICARPUS PSEUDOPECTINATUS					
1 E	Pelecyphora strobiliformis	4				
	* Encephalocarpus strobiliformis	100			1,200	
	SPECIES TOTAL	(104)			(1,200)	
# 2 N	Peniocereus greggii SEE CEREUS GREGGII					
2	Peniocereus greggii v. transmontanus			3		
2	Pereskia spp.				2 SH	

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2 E	Pereskia pititache		10			
2	Philippicereus castaneus					12
2	Pilosocereus aurilanatus				1	2
# 2 E	Pilosocereus chrysacanthus SEE CEPHALOCEREUS CHRYSACANTHUS					
# 2 E	Pilosocereus palmeri SEE CEPHALOCEREUS PALMERI					
2	Pilosocereus tweedyanus				1 SH	
2	Pseudopilocereus minensis (U)		1			
2	Pseudopilocereus pachycladus (U)		12	10		
2	Pseudopilocereus saxatilis (U)			1		
2 E	Pterocactus fischeri	1				
2 E	Pterocactus tuberosus			25		
2	Pterocereus foetidus			1		
2 E	Rathbunia alamosensis				1 SH SD	
2 E	Rathbunia sonorensis			1		
2	Rauhocereus riosaniensis		1			
2	Rebutia spp.			4		
2	Rebutia albiareolata			2		
2	Rebutia albiflora			2	1	

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2	Rebutia albipilosa			1		
2	Rebutia albopectinata (U)		6	2		
2	Rebutia cajasensis				1	
2	Rebutia donaldiana		31	2		
2 E	Rebutia flebrigii			1		
2	Rebutia fusca			18		
2	Rebutia heliosa		49	1		
2	Rebutia heliosa v. cajasensis (U)			3		
2 E	Rebutia krainziana		7	2		
2 E	Rebutia kupperiana		10			
2	Rebutia maxillaria (U)		1			
2 E	Rebutia minuscula			1	1	
2	Rebutia narvaecense (U)			2		
2	Rebutia nitida			23		
2 E	Rebutia pulvinosa			1		
# 2 E	Rebutia pygmaea SEE LOBIVIA PYGMAEA					
2	Rebutia wessneriana v. calliantha			1		
2	Rhipsalidopsis spp.				1	

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2	Rhipsalis spp.			4	2	
r2 N	Rhipsalis baccifera					
	* Rhipsalis cassutha			2	8	
	SPECIES TOTAL			(2)	(8)	
2 E	Rhipsalis capilliformis			2		
# 2 N	Rhipsalis cassutha					
	SEE RHIPSALIS BACCIFERA					
2 E	Rhipsalis cereuscula			2		
2 E	Rhipsalis houlletiana			2		
2	Rhipsalis kirbergii			6		
2 E	Rhipsalis mesembryanthemoides			2		
2 E	Rhipsalis parodoxa			2		
2	Rhipsalis rauhiorum			7		
2 E	Rhipsalis rhombea			3		
2 E	Rhipsalis trigona			2		
2 E	Rhipsalis tucumanensis			2		
# 2	Ritterocereus spp.					
	SEE LEMAIREOCEREUS spp.					
2	Rodentiophila coplapoinsis (U)				1 SH	
# 2 E	Roseocereus tephracanthus					
	SEE TEPHROCACTUS TEPHRACANTHUS					
2 H	Schlumbergera buckleyi				1	

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
†2 N	Sclerocactus glaucus					
	* Pediocactus glaucus	3		2		
	SPECIES TOTAL	(3)		(2)		
†2 N	Sclerocactus mesae-verdae					
	* Pediocactus mesae-verdae	4				
	SPECIES TOTAL	(4)				
r2 N	Sclerocactus polyancistrus	4				
2 N	Sclerocactus whipplei	2				
e2 N	Sclerocactus wrightiae	1				
2	Selenicereus atropilosus (U)		12			
# 2 N	Selenicereus grandiflorus					
	SEE CEREUS GRANDIFLORUS V. GRANDIFLORUS					
2 E	Selenicereus urbanianus			1		
2	Stenocactus spp.			11	60	
					+ 1 SH	
# 2 E	Stenocactus albatus					
	SEE ECHINOFOSSULOCACTUS ALBATUS					
# 2 E	Stenocactus coptonogonus					
	SEE ECHINOFOSSULOCACTUS COPTONOGONUS					
2	Stenocactus maxillaria (U)		1			
# 2 E	Stenocactus multicostatus					
	SEE ECHINOFOSSULOCACTUS MULTICOSTATUS					
2	Stenocactus wippermannii			2		
# 2 E	Stephanocereus leucostele					
	SEE CEPHALOCEREUS LEUCOSTELE					

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2	Strombocactus spp.			1	4 SH	
	* Turbinicarpus spp.			4	1 SH	
	GENUS TOTAL			(5)	(5 SH)	
2 E	Strombocactus disciformis			553	1,100	
2 E	Strombocactus klinkeranus					
	* Turbinicarpus klinkeranus		4	1		
	SPECIES TOTAL		(4)	(1)		
2 E	Strombocactus macrochele					
	* Turbinicarpus macrochele			1		
	SPECIES TOTAL			(1)		
2 E	Strombocactus pseudomacrochele					
	* Turbinicarpus pseudomacrochele		3	249	500	
	SPECIES TOTAL		(3)	(249)	(500)	
2 E	Strombocactus schmiedickeanus					
	* Turbinicarpus schmiedicklanus			657		
	SPECIES TOTAL			(657)		
2	Submatucana aureiflora			2		
2	Submatucana paucicostata			2		
2	Subpilocereus russellanus			500		
2	Sulcorebutia spp.				3 SH	
2	Sulcorebutia arenacea	1		1		
2	Sulcorebutia candiae			1		
2 E	Sulcorebutia caniqueralii			3		
2	Sulcorebutia flavissima			1		

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2	Sulcorebutia frankiana			41		
2	Sulcorebutia glomeriseta			1		
2	Sulcorebutia glomerispina			1	1 SH	
2	Sulcorebutia hellosa (U)			1		
2 E	Sulcorebutia kruegeri			1		
2 E	Sulcorebutia lepida			1	1	
2	Sulcorebutia menesesii			2	1	
2	Sulcorebutia mentosa			1		
2	Sulcorebutia mizquensis		1	1		
2 E	Sulcorebutia rauschii		7	4	1	
2	Sulcorebutia steinbachii			4	1	
2	Sulcorebutia taratensis			1		
2	Sulcorebutia tarijensis				1	
2 E	Sulcorebutia tiraquensis			1		
2	Sulcorebutia totorensis			2		
2	Sulcorebutia tunariensis			1	1 SH	
2	Sulcorebutia verticillacantha			1		
2	Sulcorebutia vizcarrae			1		
# 2 E	Tephrocactus articulatus v. diadematus SEE OPUNTIA ARTICULATA V. DIADEMATUS					

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
# 2 E	Tephrocactus articulatus v. inermis SEE OPUNTIA ARTICULATA V. INERMIS					
2	Tephrocactus atacamensis					22
2	Tephrocactus bolivianus			7		
# 2 E	Tephrocactus covillei SEE OPUNTIA LITTORALIS V. VASEYI					
2	Tephrocactus flexispinus			1		
# 2 E	Tephrocactus floccosus SEE OPUNTIA FLOCCOSA					
2	Tephrocactus horridus					12
2	Tephrocactus longispinus (U)					12
2	Tephrocactus molinensis			2		
2	Tephrocactus paediophillus			2		
2	Tephrocactus reicheanus					17
2 E	Tephrocactus tephracanthus					
	* Roseocereus tephracanthus			1		
	SPECIES TOTAL			(1)		
2	Thelocactus spp.				4 + 2 SH	
2 N	Thelocactus bicolor			139 + 1,502 SD + 5 OZ SD	251 + 2 SH SD	
2 E	Thelocactus conothele v. aurantiacus			50	35	

Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2 E	Thelocactus heterochromas		4	55		
2 E	Thelocactus knuthianus					
	* Gymnocactus knuthianus		1			
	SPECIES TOTAL		(1)			
2	Thelocactus mcdowellii			1		
2 E	Thelocactus nidulans		1	169	100	
2 E	Thelocactus saussieri		4			
2 E	Thrixanthocereus senilis			1		
# 2 N	Toumeya papyracantha					
	SEE PEDIOCACTUS PAPYRACANTHUS					
2	Trichocereus spp.				29	
2 E	Trichocereus bridgesii			1		
2 E	Trichocereus candicans			6		
2 E	Trichocereus chiloensis					12
2 E	Trichocereus litoralis					12
2 E	Trichocereus pachanoi			15		
2 E	Trichocereus pasacana		2	2		
2	Trichocereus skottsbergii					9
2 E	Trichocereus spachianus		1	5 + 5,000 SD		
2 E	Trichocereus terscheckii		10			

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2 E	Trichocereus werdermannianus			1		
# 2	Turbinicarpus spp. SEE STROMBOCACTUS spp.					
2	Turbinicarpus flaviflorus			110		
# 2 E	Turbinicarpus klinkeranus SEE STROMBOCACTUS KLINKERANUS					
2	Turbinicarpus laui			4		
2 E	Turbinicarpus lophophoroides		6	120	380	
# 2 E	Turbinicarpus macrochele SEE STROMBOCACTUS MACROCHELE					
# 2 E	Turbinicarpus pseudomacrochele SEE STROMBOCACTUS PSEUDOMACROCHELE					
2 E	Turbinicarpus pseudopectinatus			4		
	* Pelecyphora pseudopectinata			1,326 + 1,700 SD	5,335	
	* Normanbokea pseudopectinata	1				
	SPECIES TOTAL	(1)		(1,330 + 1,700 SD)	(5,335)	
2 E	Turbinicarpus schwarzii		4	2		
# 2 E	Tubinicarpus schmiedickianus SEE STROMBOCACTUS SCHMIEDICKIANUS					
2 E	Turbinicarpus valdezianus			1		
	* Normanbokea valdeziana	1				
	SPECIES TOTAL	(1)		(1)		
2	Weberbaurocereus fascicularis			3		
2	Weberbaurocereus weberbaueri			1		

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Codes	Scientific Name	1977 Commercial Exports	1978 Commercial Exports	1979 Commercial Exports	1979 Commercial Imports	1979 Noncommercial Imports
2	Weingartia riograndensis	6				
2 E	Wilcoxia schmollii				100	
2 E	Wilcoxia viperina			34		
2	Zygocactus cabnival (U)			1		

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